continuum transport band, which would otherwise occur if the transport band abruptly changed. The smooth transport band results from having a uniform barrier height between the different wavelength sensitive QWIPs in the two-color QWIP structure 1700. A uniform barrier height will generally create a smooth continuum transport band. In particular, a smooth continuum transport band is accomplished by using $Al_xGa_{1-x}As$ barriers for both wells and by configuring the GaAs quantum well 1704 and the $Al_yGa_{1-x}As$ quantum well 1706 to have the same barrier height. As a result, the continuum transport band 1708 is smooth across both types of quantum wells 1704, 1706. --

In the claims:

1. (Amended) A quantum well infrared photodetector (QWIP) comprising:

a substrate formed of a semiconductor material; and

a plurality of photodetectors disposed relative to one another to form an array on said substrate, each photodetector having first and second quantum well structures, one stacked over the other and each comprising a plurality of alternating barrier layers and well layers, each well layer of each quantum well structure coupled between two barrier layers to support an